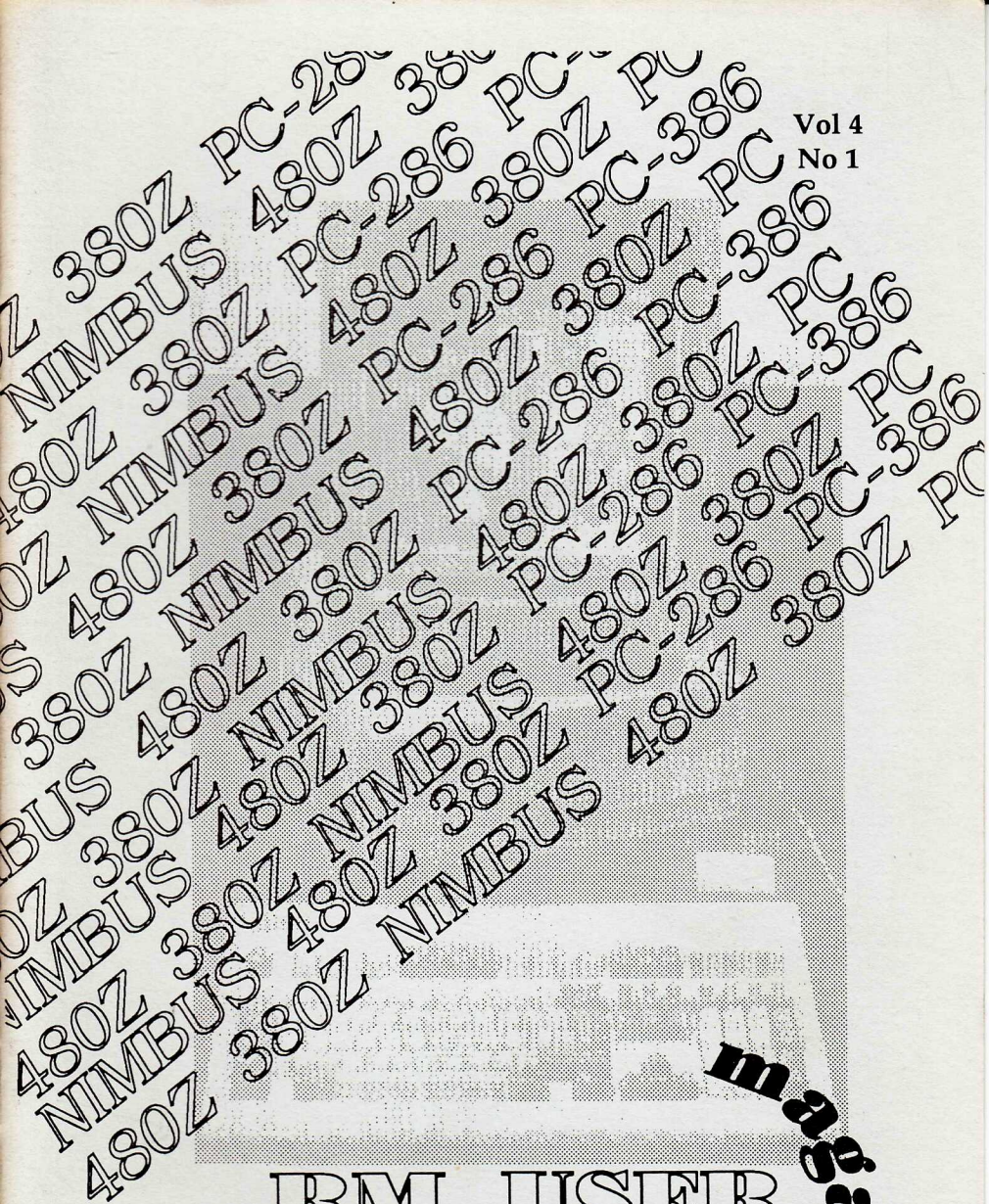
Vol 4
No 1



RM USER magazine

May 1989

PaintSpa Mouse Package

DTI Design and Technology programme Eligible for full grant.

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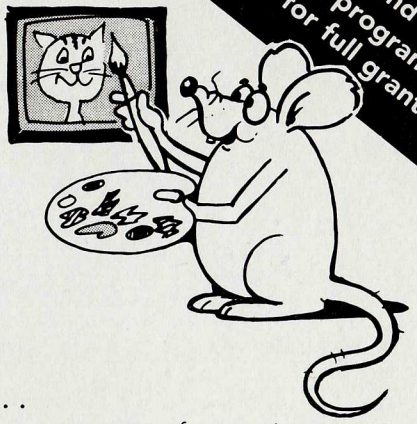

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SPA

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HELP-LINE

The User Group contains a great body of expertise amongst its members and the help-line exists to act as a channel for spreading knowledge and especially answers to your problems.

Remember, your problems are also our problems!

If you are in difficulty, please feel free to **ring anybody on the Committee** (see inside back cover). We may not, individually, know the answers, but we hope that we may know someone who knows someone who.....!

Remember, the Group is on **TELECOM GOLD 72:MAG 90380**

Do feel free to write either to the Editor or the Secretary. This may be especially useful if the problem is complicated and non-urgent.

Advertising in the Journal

Full- and half-page advertisements can be placed in the Journal and details can be obtained from the Advertising Manager (address on Committee Page at back. We also take classified adds and members may place free adds for surplus kit in Micro-Mart, provided a valid membership number is quoted with the add.

Rates

Back Cover: £75 Inside Cover: £60 Full Page: £50

Half-page: £30 Classified: £5 / 100 words

These rates assume black-on-white, camera-ready copy. Typesetting is charged at cost and is additional to the above rates.

The deadline for the next issue is July 1st1989
The deadline for the following issue is September 1st 1989

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Editorial

This is the first issue of *RM User - The Magazine* (as opposed to The Movie). The Committee decided that the concept of a "journal" was too forbidding and not really relevant, so you now have a Magazine instead of Newsletters and Journals!

I hope that we can produce a minimum of 6 issues each financial year, possibly 8 - but that all depends upon the availability of material. Thanks to those who have recently sent material, please keep on writing. Anything about RM machines and their use is welcome.

Can I encourage you all to be thinking about the conference in October. Booking forms should be available very soon and, as always, the event is a must for all RM users and a major event in educational computing.

Any views on VADS? *What*? I hear you cry. Sometimes known as TTNS, Prestel or CAMPUS 2000. Since the DTI funded a telephone line for each secondary school/college, we should all be beavering away boosting our BT shares. What are you all doing with CAMPUS 2000 - apart from complaining about the 3 months it's taking to upgrade from TTNS. According to TTNS, this delay is down to the Prestel end. Is it worth nearly £400 per annum? Please write in (preferably on disk) and let us know what use you make of such services.

We are hoping to arrange another Day Meeting soon, hopefully before August - or possibly September - which will be in the South-West.

For those who are interested, much of the cover design was produced using Corel Draw!, the latest graphics program for PCs. Running under Windows 2, it has been receiving rave reviews in various magazines. One of its attractions over, say, Designer, is the ability to fit a line of text effortlessly to a shaped line. The faint picture behind the words is a scanned photo of RM's PC-386SX. This has been dropped into PageMaker 3 and treated with that program's image control.

On the subject of RM's Bulletin Board, I have suggested to them that they should consider the possibilities of making this excellent service more widely available by either renting an 0345 dialling code from BT (local call anywhere) or perhaps getting the service into Campus 2000.

Finally, a plug for Educational Networks '89. This conference takes place in September at Newman College. Organised by LTS, RESOURCE and NCET/MESU, it promises to be of great value to all networkers. We shall be there! Please contact Michael Trott on 0386-792617 or Nick Evans on 0302-340331

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5 April 1988

J.A.Ellis
Marsh Cottage
Surlingham
Norwich
NR14 7AJ

Mr Robin Davies
RM User Group

Dear Robin

Thank you for the opportunity of a review of QESF17. Criticism was expected and is accepted. The title of the review however is misleading. Graph Play is not the name of the compilation but an additional program to it, sent to RMUG at a later date.

The actual program **GRAPHPLAY**, was not part of the review and is significantly different from the others in its range of options, some of which are more open ended. Please could you pass the full version of QESF18 to Peter Howell so that he may view the program GRAPHPLAY and use it should he so wish with the rest of the compilation in the future. He offers fair comment and, as the author of the programs, I agree up to a point with the statements in the review, even those that are less than complimentary!

It would be a sad day indeed if the motivation for doing maths was purely provided by games or sideshows. I am at present exploring the use of RM LOGO with my 1st, 2nd and 3rd year maths classes, now that we have 16 networked stations. What a way to introduce geometric and algebraic concepts together in a visual and interactive way! How often does one find it difficult to send the class off to lunch at the end of the morning session?

Despite the presence of this and other similarly educationally acceptable uses of the computer I feel that game play is important and can be used to motivate. It can also be investigated if desired. Pairs of pupils discuss and learn from each other when working together at the computer. It is necessary, especially with less able pupils, to present the practice of some basic skills in a variety of motivating ways. The software is offered as an easily used and inexpensive option for practice of defined skills. With this in mind I hope that it can be seen to have a useful place in the classroom.

I would appreciate a clear indication in the next publication that the software reviewed was not, and did not include, the program GRAPHPLAY. What was reviewed was part of the compilation QESF17, now superceded by **QESF18** which does inlude it.

Yours sincerely
John Ellis

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BBC Basic(86)

Stephen Rochford

The magazine has recently contained a number of letters and articles about the problems of echoing the contents of print and input statements in Nimbus Basic to the printer. One possible solution is a program like Print-a-Screen from ILECC. With this loaded, pressing CTRL PRTSC at any time dumps the screen to the printer, including all graphics. Dr. Hogan's letter in Newsletter 5 indirectly gives what may be a better solution; use BBC Basic and then CTRL B does exactly what CTRL P did on 480z BASIC (and brings with it all the problems of megabyte spool files from people who don't realise they have pressed CTRL B. I think this is why RM left out the CTRL P echo facility). I know that this means working with a different version of BASIC but does this matter? Nimbus BASIC is so different from that on the 480z that it will be quite a struggle to learn anyway. The advantage of BBC Basic is that there are numerous books available on programming with it which can be used by pupils either for individual learning or as part of a course.

There are, of course, problems with using BBC Basic and the rest of this article deals with some of them. The most obvious are caused by its lack of direct support for Nimbus specific features (the mouse for example) and its weird way of handling graphics (why does PLOT 85,x,y complete a triangle?). The first can be overcome; a previous RM User (2.3 I think) carried an article on how to call the sub-bios from BBC and hence access the special functions. The latter is less easy to deal with but a chart giving details of which PLOT does what lessens the problems.

The more serious problems are caused by incompatibilities between BBC Basic on a Nimbus and the same on an Acorn machine. To be fair to RM it is a very good implementation. To implement an emulation of a completely different machine and make it substantially faster than the original is very impressive. Some of the problems are well documented in the manual; the one which can cause most trouble is the screen size. The Nimbus screen is 6 pixels shorter than the BBC screen. It doesn't sound much but there are a surprising number of programs that try to use both the top and bottom lines of the screen and leave a huge gap in between. If you are writing programs yourself then this doesn't matter; you can make sure that you only use either the top or the bottom of the screen or even avoid modes 0,1,2,4 and 5 which are the only ones affected.

Another problem is the keyboard. Considering the immense physical differences between the two keyboards, the Nimbus emulates the BBC keyboard remarkably well. The only problem comes when you want to type a line containing a mixture

of upper and lower case, as you often do on a BBC. If you have an MS-DOS prompt then pressing shift while typing reverses the case; for example if you have caps lock active then pressing shift produces lower case letters and vice versa. The same is almost true on a BBC except that you have to press shift-caps lock first. On the Nimbus in BBC Basic this does not happen. If you want to type a mixture of letters you either leave caps lock off all the time and press shift when you want capitals or leave caps lock on and take it off when you wnat lower case. Neither is ideal. Why can't it work just like MS-DOS?

There are some niggling inconsistencies and, dare I say it, bugs. The best known probably apply to the handling of * commands. For example, *E. !BOOT is often used on a BBC to read (EXEC) a text file into memory as if it had been typed at the keyboard. The same command on the Nimbus erases your file! (*EXEC works properly, however) *K. is short for *KEY on a BBC but it is ignored on a Nimbus. Neither of these matter as long as you know about them.

Some of the *FX commands are not implemented because they control the hardware directly; fair enough, but some of them are "not implemented" rather oddly. For example, *FX 5,4 selects an Econet printer. Nimbus handles network printer redirection quite differently so you would expect this FX call to be ignored. It isn't. Instead if you type VDU 2 after this call strange things happen to your screen. I think that MS DOS is writing to the screen as well as BBC Basic and the result is weird. One or two other commands have the same effect. Incidentally, on the subject of networks, *DISC and *TAPE are sensibly ignored but *NET accesses the disc and eventually gives a "File not found" error!

Another problem with *FX commands is the use of commas. On a BBC *FX 5,0 (which sets up a printer sink and hence "loses" everything sent to the printer) is exactly the same as *FX 5 0 except that the latter is easier to type! It is on the Nimbus but some commands are not. *FX 3,10 (which redirects all VDU output to the printer and hence gives asimple way of implementing LPRINT etc.) works perfectly but *FX 3 10 does not; output goes to the printer but the screen is corrupted in the way described previously.

Again, these are small points and do not really detract from the use of the language. To be honest, they are all problems caused by over familiarity with the BBC environment. If I had never used a BBC I would never have found out some of the things which can be done but are perhaps not standard. The only gripe is that anything which shouldn't be allowed should be just ignored; it shouldn't have odd side effects.

Two other minor inconsistencies concern the handling of files and the resident integer variables A% - Z%. On a BBC files are left open unless you specifically close them. On a Nimbus they are closed when a program terminates normally

or when an error occurs. The first is a sensible enhancement; the second may seem to be so but if the error concerns the file you may well want to know the position of the file pointer when the error happened or, perhaps, the data byte which caused the error. (Incidentally, WHY was the internal file structure changed? I know that FILECONV can convert many files but some random access files confuse it)

The variables A% - Z% are frequently used for passing values between programs; their value is not changed by RUN or CLEAR etc. and this is implemented on the Nimbus. On a BBC, however, the values also survive pressing BREAK. They do not on a Nimbus. This matters! When you are developing a program it is likely that it will crash so that only BREAK will retrieve it. You will then want to look at the variables to see what they were when the crash occurred. Unfortunately you can't!

Even more problematic are the BBC operating system calls which are not just not implemented but cause a fatal crash. Somewhere inthe documentation I remember reading that certain calls to the OS are trapped and the corresponding Nimbus routines used instead. For example, a call to OSWORD with 10 in A% causes a parameter block at the address given by X% and Y% to be read and the definition for the character at its head to be filled in. This is handled absolutely perfectly, as are all the OSWORD and OSBYTE calls which make sense. I quite accept that it is not possible to offer a total emulation for all the operating system calls but why can they not be trapped and ignored? There are is one particular call (OSGBPB) which does things like reading or writing blocks of a file rapidly rather than a byte at a time and also allows the directory to be read. This is a properly documented routine for the BBC and yet a call to &FFD1 causes a splendid machine crash! Why?? One other call which is useful is the one which tells you the current filing system. Admittedly it could not return some of the values (cassette, telesoftware etc.) but just knowing whether a program is running on a network station or standalone would be useful!

In conclusion: BBC Basic(86) on the Nimbus is generally well implemented and has many advantages over Nimbus Basic, not the least of which is the ready availability of many books telling you how to use it. What it needs is a second release. This would not incorporate major changes but would simply fix the minor bugs and tidy up some of the inconsistencies between it and "the real McCoy"

CD-ROM

- An extension from your word processor to a reference library.

I promised in my last article to describe how to fit a CD-Rom drive to a NIMBUS AX or VX, but first, for anyone who is unfamiliar with the concept of CD-Rom, I will outline some of the possible uses.

In essence a CD-Rom drive provides a database of upto 552 Mbytes on a single 120 mm disk. If you are happy accessing large databases via the telephone line or have direct links to a mainframe computer, read no further, this is not for you.

In operation a CD-Rom is almost indistinguishable from a disk drive, the difference being that the disks are not able to receive data, hence the "Read Only Memory".

Now, what software is available? It is unfortunate that the publishers of most CD-Rom software have set the price sufficiently high to discourage casual purchasers. But, in any sort of library situation, either to search with a computer on the premises or lending disks to borrowers for use on their machines, it offers great possibilities. The software included with each disk includes a program that will search for every occurrence of one or several words or phrases, with the facility to copy any selected information to file on an ordinary 3 1/2 or 5 1/4 inch disk or send to a printer.

Most software emanates from the United States, with the notable exception of The Oxford English Dictionary, all twelve volumes of which are available on one CD-Rom 120 mm diameter disk. This edition has been recently superseded by a new edition, so if you really need the definition of words such as "yuppie" or is it "yuppy", you will have to pay £1600 for the paper version or wait two years for the latest version to be released on CD-Rom.

For language students there is Harrap's Multilingual Dictionary Database. On one disk this provides access to five million words in eight languages: English, French, German, Spanish, Italian, Dutch, Japanese, and Chinese. Transalations are available for selected words in one language to any or all of the other seven. In addition to phonetic spelling for all the languages, the true Graphic representation is provided both on screen and on paper for Chinese and Japanese characters, as well as accents in other languages.

For the wicked there is the Bible Library. A disk containing 9 Bibles and 20 reference works, with Bible dictionaries, 2500 sermon outlines and 500 sermon illustrations, how can a reverend survive without one?

For scientists, there is information for every discipline from acoustics to zoology in The McGraw-Hill CD-Rom, with 7300 articles from the McGraw-Hill Concise encyclopedia of Science and Technology, together with 98,500 terms and 115,000 definitions of the McGraw-Hill Dictionary of Scientific and Technical Terms. Another disk provides the 1987 Registry of Mass Spectra Data database, with displayable source data and direct access to chemical names and synonyms for all compounds. Do they really mean "all"?

For Desktop Publishers there is Comstock Desktop Photography: 449 photographs which you can load into any program that accepts TIFF files, (remember your program's idea of a TIFF file may not be theirs. Try before you buy. Caveat emptor!). Photographs may be selected from within your DTP program and added to your layout, where you may move and resize them as you wish. For articles that require a photograph this offers a large selection which you can modify to suit.

For all computer users there are two disks. The Alde disk of Public Domain Software and the Blue Sail disk of Public Domain Software. Over 6000 files of Software are on the Alde disk. Most of which are archived, which means that the data is compacted by upto 50%, with even more on the Blue Sail.

I use the Alde disk frequently. There are programs for every aspect of computing. Some are free. Others request a donation to the author, while most of the remainder are cut down versions of the larger programs. Subjects covered range from print utilities, programming in various languages with source code, educational programs and computer games etc..

Writers will find Microsft Bookshelf a useful tool. Imagine a bookshelf, and on it you have the following: a dictionary (with a quick spelling checker), a Thesaurus, a geographical dictionary (your home town and its population is more likely to be included if there is an American town with the same name!), a biographical dictionary - more a list of everyone of importance before, after and including Christ, The Chicago Manual of Style - everything you need to know about setting out type prior to printing, Barlett's Familiar Quotations, an Almanac and a few more.

Now, instead of having to take one of these reference books down from the bookshelf, find what you're looking for, copy it, then put the book away, you can instruct the computer to search that book, by word or group of words. Every reference that includes your selection appears on the screen, from which you can cut and paste to the document on your word processor, which is a keystroke away. For example a search for quotations including both "mind" and "education" produced six quotations in 20 seconds, whereas a search for "today" and "tomorrow" produced 27 quotations containing both words in 30 seconds.

The most obvious weakness of Microsft Bookshelf is that it is American and much of the information is included with the American market in mind. An opportunity surely, for a British publisher to produce a similar product, but I doubt it will happen, until that industry has a more competitive pricing policy imposed upon it.

In an age when more, if not most, books at some time are put on file during their progress from word processor to printer, a golden opportunity will have been missed if more books, and reference works in particular, are not published on CD-Rom.

RM will, to date, only sell you a CD-Rom drive in the form of a turnkey system complete with an AX computer. I am informed that it is not possible to use this drive as a server on an RM network, however there is some dispute as to whether this a question of practicality related to time taken to access files or to the limitations of the network. I understand that Lantastic, from Artisoft in the States (try Lancon International on 0993-77654 in this country) has the ability to access a CD-Rom drive over the network without DOS extensions in the remote machine. Maybe someone from RM would like to comment on this.

"*Whereof one cannot speak, one must be silent*", as Mr. Wittgenstein so aptly put it.

The hardware is not expensive, the cost of adding a Hitachi CD-Rom drive to an existing AX or VX is less than £500. It is easy to fit, provided you have a spare drive slot in your machine. If you have no room for another internal drive, consider converting one of your existing drives to an external drive and installing the CD-Rom drive internally. The disk carrier on the external CD-Rom drive is not so robust as that on the internal drive.

I do not intend to repeat here information that is provided with commendable clarity and accuracy with the CD-Rom drive. If you follow the instructions supplied with the CD-Rom drive in conjuction with your computer manual, you will be pleased how easy it is to fit.

The X Series machine is so similar to the IBM that the instructions that come with the drive may be followed to the letter and you will find all plugs and cables not supplied with the drive are supplied with the computer. But, nothing's perfect. You do require two small plastic runners that fix to the sides of the drive. Check with your supplier they may not be in the drive kit. Since these plastic runners are identical to those used to support the 51/4 inch drive, the nice people at RM will put some in the post to you. Some day they may even supply the CD-Rom drive itself.

Oh! I nearly forgot to mention! Yes! You can play your CDs on it and there is a socket for headphones. Happy listening!

Keith Ashby

Keith Ashby, who has previously written for this magazine under the pseudonym of "*Leading Edge*", is a farmer who has experience of operating other businesses including light engineering and road haulage. Currently besides farming, he runs a business providing self catering holidays in Kent and abroad and builds houses. He has used personal computers in his business since 1979 and has always solved the problems that arise from their use with the minimum of outside help.

"*For the things we have to learn before we can do them, we learn by doing them*", Aristotle.

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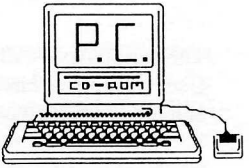

Hitachi CDR-3500S
552 Mb Internal Half Height drive.....449-99
complete with interface card, cables and software drivers for MS DOS & PC DOS
(these drives normally sell for around 650-00)

Hitachi CDR-1503S
552 Mb External drive 120V AC.....489-99
(these drives normally sell for around 750-00)
240V to 120V Transformer for above.....32-25

SOFTWARE ON COMPACT DISK

Microsoft Bookshelf.....164-99
(Dictionary, Spell checker, Thesaurus, 1987 Almanac, Bartletts quotations, etc)

American Academic Encyclopedia.....179-00
(20 volume encyclopedia, 30,000 articles with keyword search)

McGraw Hill Science & Technical Reference.....179-00
(7300 articles and 115,500 definitions plus images, with keyword search)

ALDE Public Domain Software.....88-00
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Chairman's Report: 1988/89

Peter Bishop

The period April 1988 to March 1989 has been one of consolidation for the RM User Group. We have had an increase in membership (although it has not been enough to keep up with RM's expanding user base).

There have been a number of new initiatives - the Network Server, the software fair format for User Group Days, our first Day Meeting in Belfast, the introduciton of a Newsletter to fill the gaps between issues of the Journal and the wider circulation of the Journal to a number of influential people in educational computing. The Software Library has grown steadily in size and use, with attention shifting almost entirely to 16-bit material. We now have a well-established line of communication with RM, based on a recognition of the independence of the User Group, but with a lot of support from RM for a variety of User Group activities. The highlight of the year was a very successful Conference.

A number of activities during the year deserve particular mention.

User Group Network Server

This has been loaned by RM and filled (to capacity!) with a wide range of popular software. It is available for User Group days and (on request) for demonstrations at schools and resource centres, so that members can try out software before they buy it. It is proving extremely popular. Our thanks to Graham Townsend for all the work involved.

1988 AGM - Harrow

This was well-attended, the first of our software-fair format meetings. There was great interest in the range of products on display in Harrow School's new purpose-built IT suite. The event served to strengthen our links with the independent sector. Thanks to Roger Bracey, our host at Harrow.

User Group Day - Rugby

Attendance at this event was somewhat disappointing, possibly due to travel problems. Regrettably the main presenter did not arrive. However, there was plenty to see and do for those who did come along, and an excellent lunch at the Rugby School Staff Club. The User Group Network Server had one of its first throrough tryouts. Our thanks to Clive Burton, in particular for the lunch.

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1988 Conference - Stafford

The Annual Conference was a resounding success, with an excellent venue, good attendance and plenty of software to see and try out. RM sent several staff members as delegates, and additional support in the form of equipment came from Staffordshire LEA. Thanks to Les Watson for the arrangements and Tim Denning from Staffordshire.

Day Meeting - Belfast

This was a significant innovation for the User Group, being the first time a number of us on the Committee had visited the province, an ex-Acorn stronghold. The meeting was attended by members (and prospective members) from all over the region, including several Advisers. A number of useful contacts were made and it is hoped that this will become an annual event. One problem was damage to the User Group Server in transit. Thanks to Richard Naylor for the organisation and to John Doherty and his team for the venue and excellent lunch.

The Committee

A number of members are leaving the Committee at this time. Les Watson and Graham Townsend have reached their statutory limit of service. Graham is prepared to continue to manage the Network Server and to serve as a co-opted member and Les is prepared (as a last resort) to consider organising another Conference, but wishes to stand down from the Committee. Tim Davey-Winter wishes to leave the committee and John Ward is giving up his role as 8- bit software librarian. Our thanks to all of these for their efforts over the years.

The Present - The Mission

It is worth reminding ourselves in 1989 that we are in the middle of a revolution, probably of far greater consequence than the one which broke out in 1789. The lesson from that revolution is clear - those who lose their heads are from two groups: the reactionaries and those who carry things too far. The message for the User Group is that we must move at the right pace for the times, avoiding glib techno-fixes and concentrating on the solid achievements and benefits of IT for its users.

The most pressing short-term task is to recruit more members! We must build on our successes, particularly in new ventures like the Network Server, to widen the range of our activities and thereby attract new members. Our central mission remains - to be an independent self-help group of users of RM equipment, to assist as many users as possible to experience the benefits of the revolutionary new technology.

AGM 1989

Software Library Report

After a slow start the 16-bit library is now growing steadily. I have received a lot of support and would like to thank those who have sent in goodies for the library. There are now five volumes, each very full, on 3.5 disks. I have some more material to assemble which will make one, or possibly two, more volumes. There is also some more which has been promised.

I am trying to increase the variety of software available and one good move in this direction has been the inclusion of two packages for primary schools, thanks to Les Watson.

There is a useful package of graphics routines which enable the Nimbus user to employ graphics in Turbo Pascal 3.

We also have utilities which will run on the X series machines and on the Nimbus with IBM Mode Software (SETPC.EXE).

I am concerned that we have neglected the 8-bit user during the past year. I am aware that many, like myself, cannot afford to throw away the so-called obsolete hardware while it still works. I will be looking into this and hope to be able to offer a service to 8-bit users before much longer.

I am investigating sources of public domain software and shareware but am very aware that we have to be sure such sources are reliable in the era of the virus and similar nasties.

Now comes the begging bowl. If we are to continue to give a service to the User Group we do need the help of the group.

Please look out for software which is freely available and which you think other members might find useful and send me a copy. We would like to support users of the 480Z, the Nimbus and the X-series machines, if possible.

Sheila Maynard

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RMBB - THE RM BULLETIN BOARD

Introduction

My purpose in writing these notes is to introduce a new and potentially useful resource for Nimbus users. I hope to overcome some of the techno-fear which many experienced computer users display at the thought of going "on-line" - and perhaps thereby get some of those free DTI modems out of their cardboard boxes and into service at last.

What is a Bulletin Board ?

And in particular, what is the RM Bulletin Board ? It is a serious and fully professional medium for sharing information and data files about RM computing. Perhaps I need to emphasize those adjectives. We read so much nowadays about Bulletin Boards being a prime source of passwords for illicit hacking into private computer systems that I, for one, feel that the general image of Bulletin Boards is becoming tarnished. Somewhere between a chatline and the wilder fringes of CB, if you know what I mean. The RM board is not like that. There are so many serious matters to discuss that no-one has time to be frivolous !

What is the Purpose of the RM Board ?

At this point I can't do better than quote from an early statement on the Bulletin Board itself:

This board is provided as an information service by RM Technical Support and Sales Support. Hopefully it will enable users of our products to have an area where they can discuss and seek assistance from both RM staff and our users.

If you feel that your area of interest is not yet catered for then please contact me, David Taylor, at Technical Support (0865) 796197 or alternatively leave me a message in the general mail area.

Would you like to run a message area concerning your special interest ? This facility can be arranged, again by contacting me.

David Taylor

The RM BB (I can't go on typing Bulletin Board in full) provides a 24-hour, 7-day a week information service, and is quite free, apart from your telephone charges. It is for any user of Nimbus computers (or n80Zs, for all I know).

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It allows users to exchange messages, which are displayed for all to see so that anyone can benefit from the interchange: sharing experiences, asking questions and answering them, etc.

It contains downloadable files of information, such as the text from the most recent Technical Support Bulletins, and of data, such as some handy utilities, the Tech Pack disks, IBM Mode software, Wincache software, the latest PRINTER.EXE (the one which works with a Star LC24-10), and more. It's being added to, almost daily. And it's all free! There are no time charges or frame charges, like Prestel, and no ridiculously-high annual subscriptions, like Campus.

There's a new facility, too. Instead of telephoning your queries to Technical Support, you can post them on the BB at any time. They will be printed out the following day, and will then be treated like a postal request for help. The reply may itself be posted on the BB, or sent to you by snail-mail, providing you remember to include your address.

What's Needed ?

So: how to use it ? I can only quote my own experiences, and describe the system I have in use.

Hardware

I use a Nimbus PC186, which has a silicon disk and a 20_Mb winchester, but neither of these is important in this case. The modem is a DTI Schools modem, the Tandata TM512-TP. This is connected to the AUX/PICO port of the Nimbus, which must be set up using CONFIG.EXE as IO - input/output. The baud rate is not important: the software will sort that out for you.

Software

I use both "Contact" and "Kermit". Contact is easy to use (oh, yes it is!), but Kermit is needed for certain operations, as we shall see.

Logging-on

The logging-on dialogue goes in general something like this:

1. The Nimbus tells your modem to seize the phone line and to dial the BB computer.

2. The BB modem replies with an answer tone.

3. The modems establish the link, and report to the computers.

4. You can now communicate with the distant BB computer, making selections from the menu, etc.

Preparing Contact

Contact reads its setting-up data from "profile" files, and you need to prepare one of these, called RMBB.XOS for example, before you try to log on. The method is described in the Contact manual, but here is a summary:

1. Run Contact, and choose F7 (Settings). Work down the pull-down menu of options, setting each as follows:

Modem	DTI Schools
Serial Port	AUX
Baud Rate	V23 (1200/75)
Bits and Parity	8 data no parity
Directory for Data	Choose a suitable one, or just leave it.
Local Echo	Off (otherwise all your keystrokes will come out ttwwiiccee).
Pulse or Tone Dial	To suit your local telephone exchange: most of us are still on pulse dialling, but you might be one of the fortunate few.

2. Go back to the menu, and choose F2=Service. Select Edit Profile, and type D for dial, followed by the BB number which is 0865796431.

3. Press <F2> to go back to the menu again, and choose F2=Service and Save Profile. Give your filename, e.g. RMBB, and Contact will add the .XOS extension. You are now ready to go on line .....

Using Contact to Log-On

1. Run Contact, with the modem switched on and plugged-in to the telephone line.

2. Choose F2=Service and the Contact option.

3. Select RMBB from the list of "services", and watch in fascination as the computer tells the modem what to do. The modem replies with a series of curious messages like this:
   &DIS
   &+++
   &+++
   &DLG,0865796431 (i.e. dialling)
   &WAT (you should then hear the two modems squeaking at each other)

4. If all is well, you will then get &CTL, which means Connected to Line, and you are through ! After a short pause, you should see the opening screen.

Logging-On

When you make your first call to the BB, you will be asked to give your name and a suitable password (which you can change as often as you wish). You will be asked a few questions about your location and the system you are using, and you will then be registered as a user. On later calls to the board, you merely type your name and password. You will then see any News-Flash messages, and the main menu, as follows:

Main Menu

S - Special interest areas
I - Information from RM
F - File areas
M - General mail
B - Bulletin board utilities
C - Page Sysop for help
Q - Answer new user questionnaire

T - Time statistics
G - Goodbye

I haven't tried all these options yet, but I suggest that new users should begin by looking at the General Mail section (type M). If there are lots of fairly long messages on display, they could take quite a time to read, and you may prefer to save the messages on disk for a more leisurely browse later, when you are not still clocking up telephone time. (You can read the file either by using TYPE in MS-DOS, or by loading it into a W.P. and printing it.)

To do this, as soon as you log on, press F5=To Disk and choose Save Unchanged. Give a filename, with a drive if you wish. I always save to my silicon disk for speed, so I give f:\RMBB12.DOC for instance, if I happen to be using the board on the 12th of the month. From then on, all your dialogue with the BB will go on to that file.

The Need for Kermit

So much for the message and text part of the BB. What happens when we want to download some software ?

Unfortunately, Contact won't do this. The reason is all to do with British Telecom and the fact that their telephone lines occasionally suffer interference. If a text file, such as a message, gets slightly corrupted, no-one is heart-broken. After all, we could all interpret a "rulletin board", couldn't we ? However, this would be disastrous if it happened in the middle of a machine-code file. We need an error-checking system, which can tell if this sort of corruption happens, and ask for a repeat of the corrupted part of the file. This facility is something which Contact doesn't have (although it's time it did !).

So we have to use a different communications software package, and Kermit is the only one available for the Nimbus PC186 at present. The complete file is chopped up by the BB's Kermit into small blocks or "packets", and these are neatly wrapped up along with a checksum. When your Kermit receives a packet, it unwraps it, checks the checksum, and if it is correct, it sends "O.K.; send me the next packet". If it's not correct because an error has occurred in transit, it sends "Wrong; send me that packet again". This is repeated as necessary until the packet checks O.K. Obviously the better your BT connection, the less of these repeats will be needed.

Using Kermit to Download a File

In some respects this is easier than using Contact, because you don't have to prepare a setting-up file. But I must confess that the whole operation is a bit more fiddly. Here goes:

1. Run Kermit (mine is AKMIT25.EXE).

2. Choose the Set/Show Parameters option, and use the cursor keys to set each parameter as follows:

Baud-Rate	1200
Parity Generation	0 = OFF
List/Debug	Dot-per-block
8th-bit Mode	8-bit image

   (The rest of the settings are the defaults.)

3. Go back to the menu, and choose Connect to Mainframe.

4. Press <return> to get the prompt "Connecting you to Remote Mainframe ....."

5. Press <return> again to talk to the modem, and get the modem prompt &+++.

6. Type the BB number to be dialled (0865796431).

7. Wait for the usual modem replies: DLG, WAT and (if all is well) CTL.

8. You should get the entry page.

9. Type F to go to the main File Area.

10. Choose the appropriate file area for your subject of interest, and note the filename. Then choose D to download.

11. Type K to indicate that you are using Kermit.

12. Give the filename you wish to download. As most of the download files have been "crunched" by using a file compressor called "ZIP", probably the most useful file to begin with is the uncruncher, which is called PKUNZIP.COM. This can be found in the U (for Utility) area.

13. When you get the rather frightening prompt "Last_Chance_!", press F4 and then <K> to get back to your own Kermit menu.

14. Choose Receiving Files.

15. At the prompt "Store Under Own Names ?", answer N and give your own

filename (again, I usually save to silicon).

16. After pressing <return>, the download proceeds, with a dot appearing on the screen for each successful packet transferred.

17. When finished, press any key to get back to your Kermit menu, and choose "Connect to Mainframe" again. Pressing <return> will then take you back to the BB menu.

Download Times

Before you get too excited at the thought of all that totally-free software, a little arithmetic is called for. The down-link from the BB to you is at 1200 baud, which in round terms means 120 bytes per second. A file which is 1.2 K long should therefore transfer in about 10 seconds: a 120 K file should take about 1000 seconds or just over a quarter of an hour. And this is at the theoretical maximum possible speed.

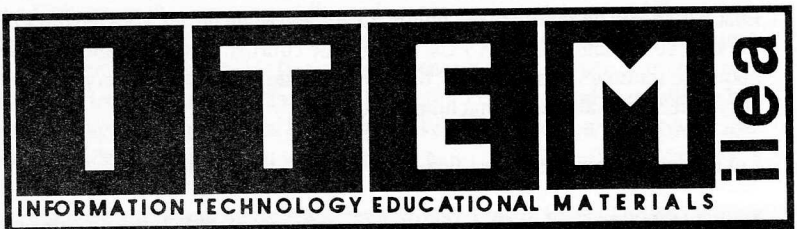
If you use Kermit, the packet wrapping and unwrapping takes extra time, to say nothing of any repeat packets. In my experience, you can expect to take about 1_minute to download 2 K with Kermit. I recently downloaded Tech Pack 7, which is a 298 K file. Yes, nearly two and a half hours ! (And it would have cost me only £9-00 + VAT on a floppy.)

Conclusions

Is it worthwhile ? My answer would be definitely "yes". For instance, last weekend, when all my files of RM Technical Support Bulletins were at School, I needed to know how to direct printer output from Windows to the parallel printer port LPT0. Simple: I logged-on to the BB and read the article by Wendy Simonsen, which explained it all. (I also downloaded the advance information on the new PCs.) Moreover, although much of the in-fighting between members of Technical Support is too esoteric for me to understand, I must admit that it makes interesting reading.

What changes are needed ? An error-correcting version of Contact, for a start. But the biggest blessing for those of us unfortunate enough to live at b-rate distance from Oxford would be for RM to pay for one of those special telephone numbers which allow access at local-call rates from anywhere in the country. At present, downloading long files is equivalent to standing in a telephone call-box, tearing up £5 notes !

Jake Loddington
Queen Elizabeth's Grammar School, Blackburn



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RM's New Machines

Last month RM, at seminars in London, Leeds and Manchester, showed the world the new 80286 and 80386SX PCs. It would be churlish to say that the best thing about the seminars was the lunch, but the chocolate strawberry sweets were very, very nice. More about the machines below!

Let me quote from the press release:

Research Machines have launched a range of compact, PS/2-compatible workstations using microchannel architecture (MCA) and 80286 and 80386SX processors. Called the Nimbus PC-286 and PC-386, they are aimed at the CAD and corporate networking markets.

With a footprint of 14" square and a height of 4" they are the smallest 286 or 386SX MCA machines on the market and have a number of capabilities that are unavailable on earlier MCA micros. These include VGA professional graphics with a low-cost 19" screen option and a new RM memory management system called OverDOS. All models are compatible with PC and AT standards as well as OS/2 and SCO Xenix. Prices start at just £1995.

Well, that's the hype - as far as RM indulge in hype. What's the reality and, if the machines are aimed at the CAD and corporate markets, what's in it for education?

The Seminars were not just a question of "they're over they and lunch is over there", but an interesting look at RM's position, strategy and philosphy.

We were regaled with statistics and charts. Some of the more interesting were on RM's financial growth and strength, plus their share of the market. For example:

Turnover

1985	£11.4 million
1989	£52 million

In schools, turnover rose as follows:

1985	£ 5.7 million
1989	£28.5 million

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RM now feel that they have 50% of educational sales. 17 new LEAs adopted the Nimbus range during 1988/89.

What was most interesting was to hear RM's future direction outlined, both in general terms and with particular reference to education. It is as well to compare all this with that of their competitors - where they have a strategy.

In general terms, RM are looking at three areas:

1. Continued growth
2. Micro CAD
3. Business & government networks in both the UK and Europe.

Of more interest to the majority of our readers are RM's ideas for education and IT in the 90's.

Clearly, RM see themselves as offering stability and a breadth of solutions within the whole educational structure. Whilst supporting the 8-bit concept - especially in the Primary sector through BBC Basic86 - RM are committed to the 16/32 bit norm through moves to power specialisations and the expansion of networking.

The new machines fit nicely into the concept of a complete Nimbus PC range, from the 80186 to the 80386SX. In this concept are the fourfold elements of a micro range; netowrks; applications interface (Windows) and supporting services.

The new machines conform to the very important concept of compatibility within a range, with full PC-186 compatibility as a matter of course.

So what's the difference between these new machines and the earlier X series and Nimbus PC-186?

In the first instance, it's the MCA bus. Secondly - as far as the PC-186 is concerned - it's full IBM compatibility. The X series are IBM AT bus compatible, whereas the MCA bus on the new machines is very different. Thus, if you have an additional card plugged into your X series machine say, to run a 19" DTP monitor, it won't fit into the MCA bus.

Down to details *(the look and feel)*

Pre-production models were rather bulky but, as the photo of the PC-386SX shows, the production machines are slim and compact. Much as we indicated in

January, the main board contains a wealth of facilities that do not, as on other makes, need to be provided by an add-on card.

That's just as well, because there are only 3 expansion slots available and if you want a disk controller - and who won't - then the 3 becomes 2. RM's argument is that most of the things you might need cards for are built in to the machine. This isn't totally true and there didn't seem much sense in, as was done, emphasising the 600 MCA cards already available with another 1200 coming during the next 12 months if you haven't the slots for them.

I have to confess to having lots of cards in my 80286, including one to read/write Mac disks; one for the scanner; an additional card to give extra serial ports for comms. So, I would find just two spare slots frustrating.

However, RM are right to emphasise the built-in facilities. I would not need cards for a mouse; for a 19" dtp monitor or extra memory - all of which are facilities built into the main board. This makes for efficient and fast operation, so that the apparently slow (10 Mhz) speed of the PC-286 is compensated for by the efficient internal design and operation.

RM make much of their new memory management system, OverDOS, which is designed to make their new PCs zip along faster than those of the opposition. That seems to work, but in the absence of any benchtests, that's a subjective response.

Built in to the system is EMS 4.0 support in software and this can be a hardware option for the PC-286. This enables reasonably efficient use of memory over the 640Kb barrier. Memory comes as 1Mb standard and can be expanded up to 8Mb on the main board direct.

The larger hard disks (60Mb and 120Mb) run fairly snappily, but the 40Mb one is rated quite slowly at 40mS, but RM's implementation of this seems to suggest an apparent better performance by careful choice of disk controller and software.

Pricing

This isn't the place to list all of the options and all of the prices, but one that did attract my attention was the PC-286 PC60 with 19" mono moniter - rather the sort of system I'm now using. The educational price for this was £2539. That, even with the dreaded VAT, is pretty fair.

So, what have we got? Well, a pleasing addition to the RM range. Add the value for money to the 3-year guarantee and they ought to sell a few. I wouldn't mind one myself.

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1989

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